

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: GREGG LAKE	Lake Area (ha): 78.95
Town: ANTRIM	Maximum depth (m): 11.0
County: Hillsborough	Mean depth (m): 5.3
River Basin: Merrimack	Volume (m ³): 4199000
Latitude: 43°02'10" N	Relative depth: 1.1
Longitude: 71°59'08" W	Shore configuration: 2.03
Elevation (ft): 1053	Areal water load (m/yr): 8.39
Shore length (m): 6400	Flushing rate (yr ⁻¹): 1.60
Watershed area (ha): 1191.4	P retention coeff.: 0.57
% watershed ponded: 0.1	Lake type: natural w/dam

BIOLOGICAL:

		7 February 1995	30 August 1994
DOM. PHYTOPLANKTON (% TOTAL)	#1	SYNURA 35%	ANABAENA 20%
	#2	DINOBRYON 35%	MICROCYSTIS 20%
	#3	PERIDINIUM 15%	PERIDINIUM 15%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			2.13
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 37%	KERATELLA 61%
	#2	ROUND CILIATE SPP. 32%	CALANOID COPEPOD 17%
	#3	CYCLOPOID COPEPOD 8%	
ROTIFERS/LITER		67	73
MICROCRUSTACEA/LITER		21	36
ZOOPLANKTON ABUNDANCE (#/L)		129	109
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			8.3
BOTTOM DISSOLVED OXYGEN (mg/L)		8.5	0.1
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	6.7
Hypolimnion volume (m ³):	118500
Anoxic volume (m ³):	278500

CHEMICAL:

Lake: GREGG LAKE

Town: ANTRIM

	7 February 1995		30 August 1994		
DEPTH (m)	3.0	6.0	3.0	7.0	9.0
pH (units)	5.7	5.7	6.5	6.0	5.9
A.N.C. (Alkalinity)	1.5	2.6	1.7	1.9	4.3
NITRATE NITROGEN	< 0.10	< 0.10	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.28	0.25	0.22	0.20	0.31
TOTAL PHOSPHORUS	0.008	0.011	0.011	0.012	0.032
CONDUCTIVITY (μ mhos/cm)	26.4	27.6	29.4	29.4	35.3
APPARENT COLOR (cpu)	24	33	12	16	90
MAGNESIUM			0.27		
CALCIUM			1.5		
SODIUM			2.6		
POTASSIUM			0.32		
CHLORIDE	3	3	3		4
SULFATE	4	4	2		3
TN : TP	35	23	20		10
CALCITE SATURATION INDEX			4.4		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

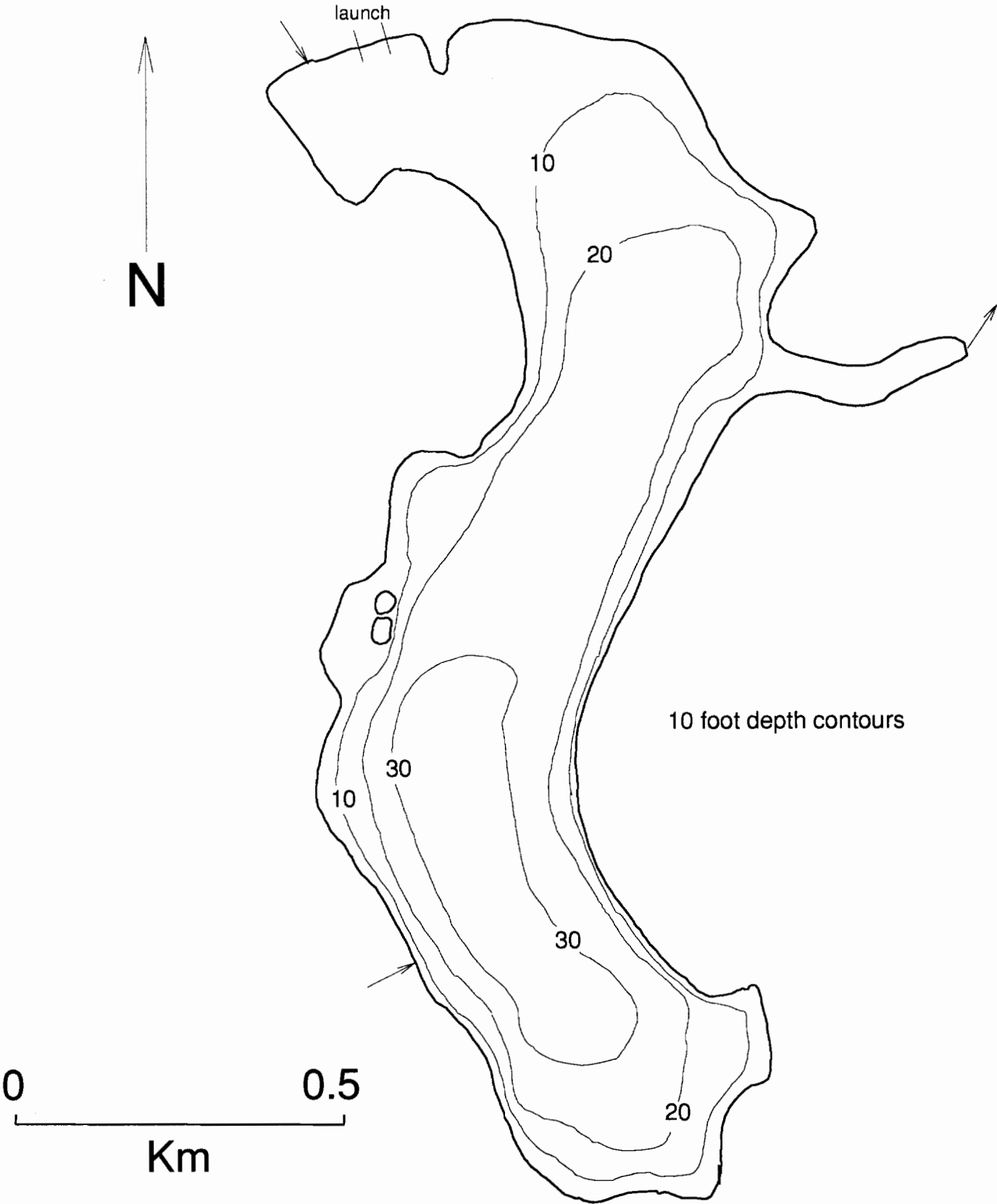
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	0	1	0	5	Oligo.

COMMENTS:

1. This lake was previously surveyed and classified in 1978. There was no change in trophic classification and little change in water quality between the two dates, although water clarity more than doubled in 1994 (27 feet vs. 13 feet in 1978).
2. A boating speed limit of less than 10 mph within 500 feet of shore exists for this lake.
3. Although phytoplankton biomass was low and water clarity was good, blue-green algae dominated the net phytoplankton. When abundant, blue-greens form nuisance surface scums of algae.

Gregg Lake

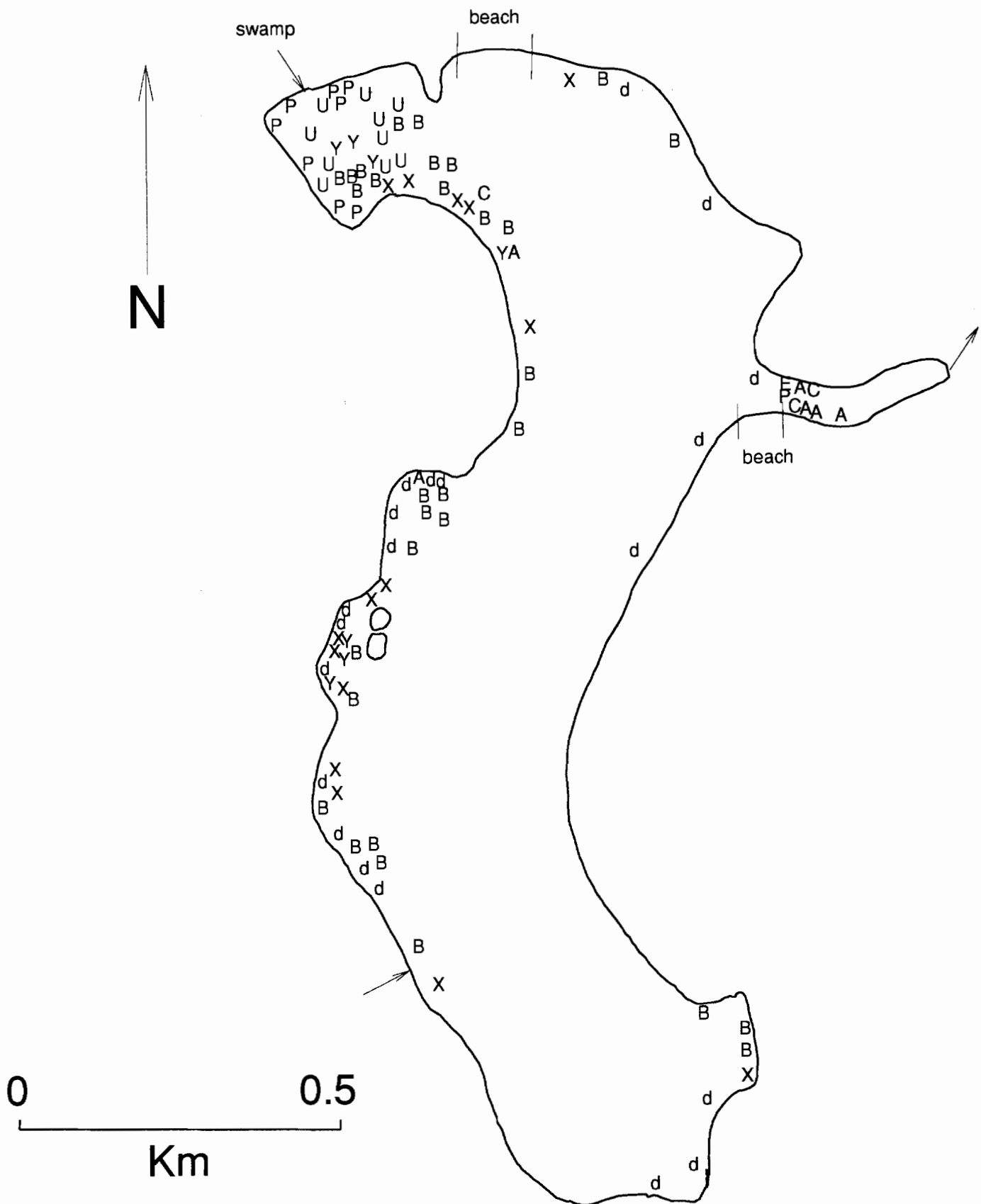
Antrim



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Gregg Lake

Antrim



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